

# Notice of Allowability

Application No.

10/612,824

Examiner

Anjan K Deb

Applicant(s)

MITROVIC ET AL.

Art Unit

2858

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 11/22/2004.
2. ☒ The allowed claim(s) is/are 1-17.
3. ☒ The drawings filed on 03 July 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### **DETAILED ACTION**

1. This office action is in response to amendment filed 11/22/2004.

#### ***Allowable Subject Matter***

2. Claims 1-17 are allowed.

#### ***Reasons for Allowance***

3. The following is an examiner's statement of reasons for allowance:

The instant application is deemed to be directed to a non-obvious improvement over the inventions patented in US Pat. No. 5,849,372 and US Pat. No. 6,089,181. The improvement comprises "providing a supplemental signal to the plasma drive electrode, the supplemental signal being controlled separately from the radio frequency electrical signal, at a frequency harmonic to the fundamental frequency and having a controlled phase relationship with the fundamental frequency."

Annaratone et al. (US Pat. No. 5,849,372) disclosed (Fig. 2) providing supplemental signal 11 to plasma drive electrode 1, the supplemental signal 11 being controlled separately from the radio frequency electrical drive signal 9, at a frequency harmonic to the fundamental frequency (column 4 lines 19-21). US Pat. No. 5,849,372 did not disclose supplemental signal having a controlled phase relationship with the fundamental frequency drive signal.

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Suemasa et al. (US 6,089,181) disclosed providing a supplemental signal radio frequency (high frequency) having controlled phase relationship with a low frequency drive signal.

In the examiner's opinion, it would not have been obvious to a person of ordinary skill in the art to modify Annaratone et al. (US Pat. No. 5,849,372) by adding supplemental signal having a controlled phase relationship with the fundamental frequency drive signal disclosed by Suemasa et al. (US 6,089,181) to arrive at the claimed invention.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Anjan K. Deb whose telephone number is (571)-272-2228. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le, can be reached at (571)272-2233.



**Anjan K. Deb**

Patent Examiner

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1/5/05

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